Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (original) A network for providing multi-service generalized Layer-2 Virtual Private Network (VPN) services, said network comprising:

a set of elements interconnected by services;

at least one first subset of said elements defining a private network;

at least one second subset of elements different from said first subset defining a provider network wherein at least two subgroups of said first subset of elements may be connected via said provider network;

a provisioning mechanism used to define element membership in said first subset of elements; and

a signalling mechanism used to create connectivity between elements within said first subset of elements, said connectivity created across said second subset of elements, and said connectivity at a layer selected from one or both of the group consisting of Layer-2 and Layer-1, said signalling mechanism having a multi-service tunnel selector mechanism used to create said connectivity.

2. (original) A network for providing multi-service generalized Layer-2 VPN services as claimed in claim 1, said network further comprising:

a network discovery mechanism used to propagate membership information regarding elements which are members of said first subset; and

a service discovery mechanism used to propagate services information regarding services interconnecting elements in said first subset with elements in said second subset.

3. (currently amended) A network for providing multi-service generalized Layer-2 ~~VPN~~ Virtual Private Network (VPN) services ~~as claimed in claim 1~~, said network comprising:

a set of elements interconnected by services;

at least one first subset of said elements defining a private network;

at least one second subset of elements different from said first subset defining a provider network wherein at least two subgroups of said first subset of elements may be connected via said provider network;

a provisioning mechanism used to define element membership in said first subset of elements; and

a signalling mechanism used to create connectivity between elements within said first subset of elements, said connectivity created across said second subset of elements, and said connectivity at a layer selected from one or both of the group consisting of Layer-2 and Layer-1, said signalling mechanism having:

a multi-service tunnel selector mechanism used to create said connectivity; and

a manager mechanism having a first portion used to effect connection admission control and a second portion used to select encapsulation in response to a connection request.

4. (original) A network for providing multi-service generalized Layer-2 VPN services as claimed in claim 3, said network further comprising:

a generalized single-sided signalling mechanism used to initiate said connection request triggered by an element of said first subset.

5. (currently amended) A method of organizing a network having a set of elements interconnected by services, wherein at least one first subset of said elements defines a private network and at least one second subset of elements different from said first subset defines a provider network and wherein at least two subgroups of said first subset of elements may be connected via said provider network, said method comprising:

defining element membership in said first subset of elements via a provisioning mechanism;

creating, via a multi-service tunnel selector mechanism, connectivity between elements within said first subset of elements, said connectivity created across said second subset of elements, and said connectivity at a layer selected from one or both of the group consisting of Layer-2 and Layer-1; and

selecting an encapsulation protocol in response to a connection request via a second portion of a manager mechanism.

6. (original) The method of claim 5, further comprising:

propagating GL2VPN membership information regarding elements which are members of said first subset via a network discovery mechanism; and

propagating services information regarding services interconnecting elements in said first subset with elements in said second subset via a service discovery mechanism.

7. (currently amended) The method of claim 5, further comprising:

effecting connection admission control via a first portion of [[a]] said manager mechanism; and

~~selecting an encapsulation protocol in response to a connection request via a second portion of a manager mechanism.~~

8. (currently amended) The method of claim [[7]] 5 further comprising:

initiating said connection request in response to a trigger by an element of said first subset via a generalized single-sided signalling mechanism.

9. (currently amended) A network for providing multi-service generalized Layer-2 VPN services as claimed in claim [[1]] 3 wherein said provider network is a non-Multi-Protocol Label Switched provider network.

10. (currently amended) A network for providing multi-service generalized Layer-2 VPN services as claimed in claim [[1]] 3 wherein said connectivity uses layer-2 pseudo-wires.

11. (currently amended) A network for providing multi-service generalized Layer-2 VPN services as claimed in claim [[1]] 3 wherein said connectivity uses layer-1 connections.

12. (original) The method of claim 5 wherein said provider network is a non-Multi-Protocol Label Switched provider network.

13. (new) The method of claim 5 wherein said selecting said encapsulation protocol comprises selecting from among a Martini-based Encapsulation Protocol, a Layer2 Tunneling Protocol, a Point-to-Point Common Header Protocol and a Point-to-Point Subnet Header Protocol.